Remarks

Applicant respectfully request reconsideration of this application as amended. Claim 26 has been amended. No claims have been cancelled. Therefore, claims 1-29 are presented for examination.

Applicant acknowledges that claims 11-20 would be allowable if rewritten to include the limitations of the base claim and any intervening claims.

Claims 1stands rejected under 35 U.S.C. §103(a) as being unpatentable over Horiguchi et al., U.S. Patent NO. 4,561,103 ("Horiguchi") in view of Szeliski et al., U.S. Patent No. 6,993,156 ("Szeliski") and further in view of Itoh, U.S. Patent No. 6,810,156 ("Itoh"). Applicant submits that the present claims are patentable over any combination of Horiguchi, Szeliski and Itoh.

Horiguchi discloses a technique for inspecting picture patterns on prints which are being run in a rotary press, and more particularly to a method in which reference data read out of a reference print is written in a memory, and inspection data read out of a print under inspection is compared with the reference data for every picture element for instance to determine whether or not the print is acceptable, and an apparatus for practicing the method. The specific feature of the invention resides in that (1) in reading the above-described data a print running speed or the position of a picture pattern in the direction of width is detected to rewrite the reference data, (2) in data comparison, the comparison level is optionally set up, and (3) the data comparison is carried out not only for every picture element, but also for the sum of picture elements over the entire picture pattern and for the sum of picture elements arranged linearly in the print running direction. See Horiguchi at Abstract.

Szeliski discloses using an affine transform. See Szeliski at col. 13, ll. 10-36.

Itoh discloses that interpolation of an image is required when an image for interlaced scanning is converted into an image for progressive scanning, when an image is enlarged, and when the resolution of an image is increased. Such interpolation of an image is achieved, for example, by increasing the number of lines constituting the image. Specifically, according to conventionally well-know methods, between every two lines of the original image, an interpolated line is added that is produced either by using the lines of the original image immediately above or below this interpolated line intact, or by calculating the average value between the lines of the original image immediately above and below this interpolated line. See Itoh at col. 1, ll. 9-20.

Claim 1 of the present application recites creating an initial replacement image from a scanned image by performing an interpolation to generate additional lines in the scanned images to correspond to a digitized source images. Applicant submits that Horiguchi, Szeliski and Itoh each fail to disclose or suggest a process of creating an initial replacement image from a scanned image by performing an interpolation to generate additional lines in the scanned images to correspond to the digitized source images.

The Office Action asserts that this feature is disclosed in Itoh. See Office Action at Page 3, paragraph 3.

Applicant respectfully disagrees with such an assertion. As discussed above, Itoh discloses performing interpolation of an image when an image for interlaced scanning is converted into an image for progressive scanning, when an image is enlarged, and when the resolution of an image is increased. Nevertheless, there is no disclosure in Itoh of ***performing an interpolation to create an initial replacement image***. Moreover, there is no

suggestion in Itoh of generating ***additional lines in a scanned images to correspond to a digitized source image***.

Therefore, Itoh fails to disclose or suggest a process of creating an initial replacement image from a scanned image by performing an interpolation to generate additional lines in the scanned images to correspond to a digitized source images. As a result, claim 1 is patentable over the combination of Horiguchi, Szeliski and Itoh since none of the references disclose or suggest creating an initial replacement image from a scanned image by performing an interpolation to generate additional lines in the scanned images to correspond to the digitized source images.

Claims 2-22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hansen et al., U.S. Patent No. 7,013,803 ("Hansen") in view of Itoh. Applicant submits that the present claims are patentable over Hansen in view of Itoh.

Hansen discloses a color registration control system for a printing press including an area scanner for acquiring an image of a paper substrate and an image processing system adapted to receive the image and process the image to determine any color register error. See Hansen at Abstract. Nevertheless, there is no disclosure or suggestion in Hansen of *creating an initial replacement image from a scanned image* ***by performing an interpolation to generate additional lines in the scanned images to correspond to the digitized source images***.

As discussed above, Itoh fails to disclose or suggest such a process. Thus, any combination of Hansen and Itoh would fail to disclose or suggest the process. As a result, claim 2 and its dependent claims are patentable over Hansen in view of Itoh.

Claims 23-29 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hansen in view of Davidson et al., U.S. Patent No. 6,952,485 ("Davidson"). Applicant submits that the present claims are patentable over Hansen in view of Davidson.

Davidson discloses a streaming mode encoder that receives incoming, sequential bands of an image. It buffers these bands in a band FIFO that is at least one block in height. A block in the context of image watermark encoding refers to the size of image data into which a watermark encoder module embeds an entire watermark signal instance. The FIFO includes two separate buffers, enabling the embedder to load one with incoming data while performing embedding operations on image blocks in the other one. See Davidson at col. 5, ll. 42-51.

Independent claims 23 and 27 of the present application each recite embedding two or more synchronization-strips into a digitized source image to form a marked source image to locate lines in a first stream of the digitized source image with a second stream of the digitized source image, wherein the synchronization-strips have a counter pattern at defined intervals to provide a unique page count. Applicant submits that Hansen and Davidson each fail to disclose or suggest such a feature.

First, Hansen fails to disclose or suggest embedding synchronization-strips into a digitized source image to locate lines in a first stream of the digitized source image with a second stream of the digitized source image. Hansen discloses using color register marks to control color register by comparing the color register marks to a predefined register mark pattern. If the printed color register marks match the predefined pattern, color is in register. A camera assembly locates and measures the relationship of the printed marks of each color relative to each other and relative to the predefined pattern. The difference between the

locations measured by the camera assembly and the predefined pattern is considered a register error. See Hansen at col. 6, ll. 62 – col. 7, ll. 29.

Applicant submits that such a process of measuring color register using color register marks cannot be considered equivalent to a process of using *synchronization-strips in a digitized source image to* ***locate lines in a first stream of the digitized source image with a second stream of the digitized source image***.

Second, Davidson fails to disclose or suggest synchronization-strips that have a counter pattern at defined intervals to provide a unique page count. Davidson discloses a watermark encoder that can be used to embed tracer data in an image as it is being printed or transferred. The forensic tracer data may include: data identifying the date of an activity from a clock in the imaging device or host computer of the driver, data identifying the serial number of a computer system, data identifying a serial number of a system component, data identifying a user of the computer system, data identifying a file, data indicating the nature of a detected event, data indicating the status of the computer system, data from a registry database, data relating to an external network connection, and data derived from a digital watermark payload. See Davidson at col. 9, ll. 45-56. Nevertheless, there is no disclosure in Davidson of ***synchronization-strips that have a counter pattern at defined intervals to provide a unique page count***.

Third, it would not be obvious to one of ordinary skill in the art to combine Hansen and Davidson to disclose the present claims. Particularly, it would not be obvious to combine the color register mechanism with the watermark encoder since they are used to implement two separate functions. As discussed above, Hansen uses color register marks to measure color register, while Davidson uses watermarks to embed data in an image.

Accordingly, one of ordinary skill in the art would not be motivated to combine the color register mechanism taught in Hansen with the watermarks of Davidson.

For the foregoing reasons, claims 23 and 27, and their respective dependent claims, are patentable over Hansen in view of Davidson.

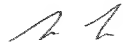
Applicant submits that the rejections have been overcome and that the claims are in condition for allowance. Accordingly, applicant respectfully request the rejections be withdrawn and the claims be allowed.

The Examiner is requested to call the undersigned at (303) 740-1980 if there remains any issue with allowance of the case.

Please charge any shortage to our Deposit Account No. 50-3669.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP



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Mark L. Watson
Reg. No. 46,322

1279 Oakmead Parkway
Sunnyvale, California 94085-4040
(303) 740-1980